Suppliers were also observed to charge different prices for the same brands to different public hospitals, indicating information asymmetry on reasonable prices of drugs. **CONCLUSIONS:** Based on the observed wide variations in drug procurement prices in the Philippines, setting the DPRI at the median value for most drugs was found to be an appropriate method to set ceiling prices for public sector procurement. For monopolized pharmaceutical products, other methods may be more appropriate such as value-based pricing, price negotiations and external reference pricing to relevant countries.

PHP119

JÓSA ANDRÁS HOSPITAL COMPLEX PROJECT - COST-BENEFIT ANALYSIS OF THE MAJOR PROJECT INVESTMENT

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OBJECTIVES: To work out the cost-benefit analysis (CBA) of the infrastructural development major project of Jósa András Teaching Hospital (Nyíregyháza, Hungary) funded by EU grants. Two supported projects (complex hospital development and an integratedemergency care unit) were merged and had to be revised according to the major project requirements because of the recent significant cost increases. At the end of 2014 the project in value of 56.15 million EUR was submitted to the European Commission. **METHODS:** The CBA was based on the guidelines outlined in the EU Regional Policy and concerning Working Document. A 25-year time horizon was determined . 5% financial and 5.5% social discount rate were applied, as recommended in the guidelines. Analyses were conducted using the incremental method considering Business as usual and Project scenario. To express the monetary value of socio-economic benefits we applied the willingness-to-pay method. The value of 24,772 EUR was used as an average value of human life year based on the published data (EuroVaq) regarding the Hungarian population. Aggregating socio-economic benefits, we considered the monetized values of the following health gains: reduction in the 30-day AMI death rate, in county cancer deaths, in infant mortality, in the number of registered people with permanent disabilities, in lost income and health gain attainable through improving the quality of care. **RESULTS:** Financial net present value (-50.6 million EUR), economic net present value (27.3 million EUR), financial rate of return (-8.15%), economic rate of return (9.44%) and cost-benefit ratio (1.62) were calculated as results of CBA. **CONCLUSIONS:** The CBA reflected the fact that health care investments in the public sector are not directly financially recovered for the owner, but - considering the broader socio-economic effects - the project meets the requirement that the level of socio-economic benefits are higher than the socio-economic costs.

PHP120

HOW IMPORTANT IS THE TIME FACTOR? SAVING LIVES USING FIRE AND RESCUE SERVICES

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OBJECTIVES: The shorter the response time of emergency services the more lives are saved. But, how important in fact is the time factor for saving lives? The objective of this study is to analyse the relation between response time and fatalities, to be able to measure how many lives could be saved with a shorter response time. **METHODS:** The study uses data from reports from the fire and rescue services in Sweden for 2005–2013 for residential fires. The time variable used is continuous and the statistical methods are non-linear regression techniques. **RESULTS:** It is found that the risk of fatality is a non-linear function of response time. The marginal effect of response time is first large, then decreases, and eventually seems to approach zero. If it was possible to decrease the median response time by one minute 0.00035 lives could be saved for every turn-out. For all turn-outs to residential homes that means that about two lives, or 3%, could be saved per year. The response time is most important for blocks of flats, nursing homes and semi-detached/terraced houses. The response time is more important for fires due to smoking, children playing or started intentionally (arson). **CONCLUSIONS:** The results can be used to evaluate the performance of local fire and rescue services. It can also be used as a planning tool for fire and rescue services when it comes to the importance of different causes of injuries. The method is easy to use for other emergency services, such as ambulances.

PHP121

THE COMPARATIVE PHARMACOECONOMIC ANALYSIS OF USING DIFFERENT VARIANTS OF BALANCED CRYSTALLOIDS DURING INFUSION THERAPY

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OBJECTIVES: The main aim of this study was to conduct a comparative pharmacoeconomic analysis of the using 2 variants of balanced crystalloids infusion therapy – acetate- (Jonosteril®) and lactate-based (Sterofundin ISO®). **METHODS:** Analysis of the published clinical trials was conducted to evaluate comparative efficacy and safety of using balanced solutions of different composition. Direct medical costs for using 2 variants of balanced infusion therapy were calculated. Taking into account the hypothesis of equal effectiveness of balanced solutions of different compositions for pharmacoeconomic analysis was chosen "cost minimization" analysis (CMA). To calculate the direct costs of infusion therapy was determined the average duration of infusion therapy in patients with traumatic shock conditions in the intensive care unit on the basis of the actual practice of the N.V. Sklifosovsky Research Institute of Emergency Care. Direct costs were included the cost of one day of application infusion therapy on the basis of 2000 ml per day for 1 patient. **RESULTS:** According to published trials the using of different combinations of crystalloids such as acetate- and lactate-based were provided equal hemodynamic stability. The average cost of a course of infusion therapy in patients with traumatic shock conditions by using acetate-balanced based solution was 34 104 rubles ($ 636.8), and by using lactate- based balanced solution - 35 936.8 rubles ($ 671). The mean annual overall direct health care cost for using lactate-based balanced solution was estimated to be 2.16 billion rubles ($40.3 million), and for using acetate-based balanced solution - 2.05 billion rubles ($38.3 million). The CMA has shown that annual savings when used as a balanced infusion therapy acetate-based solution will be 110 million rubles ($ 2.05 million). **CONCLUSIONS:** The using for infusion therapy acetate-based balanced solution Jonosteril® was more economically justified treatment option.

PHP122

CHANGES IN THE PRICES OF REFERENCE BIOTECHNOLOGY PRODUCTS BY THE PENETRATION OF BIOSIMILARS INTO THE TURKISH PHARMACEUTICAL MARKET

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OBJECTIVES: Despite concerns about interchangeability and substitution of biosimilar products with reference products, they provide cost savings either by leading price reductions or increase in discounts of reference products. There are several studies demonstrating the actual/potential cost saving effects of biosimilars. In this regard, the aim of this study is to define the price reductions or increase in discounts of reference products by the reimbursement of their biosimilars in Turkey. **METHODS:** Biotechnology products, which are still available in the market, are selected from the list of pharmaceutical products published on the Ministry of Health's web site. Their registration dates and ex-factory prices and statuary discounts between 2009 and 2014 are searched. Afterwards, the change in the reference products' ex-factory prices and statuary discounts is analyzed for the first year that biosimilar products are reimbursed. **RESULTS:** Not considering the different forms of drugs there are 80 biotechnology products (66 active ingredients) being marketed in Turkish pharmaceutical market. 10 of them are biosimilar products (7 active ingredient). The first biotechnology product and the biosimilar product were registered in Turkey in 1992 and 2009 respectively. Only 4 active ingredients have both biosimilar and the reference product. By the reimbursement of the biosimilar products, the statuary discount of all the reference products increased between %14 and %113 and the price of the 2 reference product decreased by %26 and %31 while the prices of other products didn't change. **CONCLUSIONS:** Depending on the analysis bio-similars may have a cost-reduction impact on pharmaceutical budgets. Further analysis should be conducted on the reason of price reductions of reference products by penetration of biosimilars whether by leading direct reductions or increased discounts in order to exempt the effect or general pricing regulations or cost containment measures unlikely to be specific to biotechnology products.

PHP123

DEFINING VALUE WHEN LAUNCHING BIOSIMILARS TREATMENTS WITHIN EUROPEAN HEALTHCARE SYSTEMS

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OBJECTIVES: To understand how EU healthcare decision makers define value when assessing biosimilar treatments **METHODS:** Combination of desk research to track current biosimilar market trends, followed by qualitative research including one-to-one interviews with six EU sub-national payers and key opinion leaders. **RESULTS:** European payers consider more than just list and net prices when purchasing and supplying novel biosimilar treatments for patients. Whilst payers do consider key aspects such as product attributes in the decision making process, it is economic and public health benefits, supply chain quality, reputation of the manufacturer, national guidance, support and demand from key units or physicians within their region, that remain as the most influential factors in the decision making process. **CONCLUSIONS:** Many EU payers still consider value beyond just price of a new medicine. However, recent biosimilar launches in the Nordics are challenging this paradigm and affecting discount expectations on biosimilars vs. original compounds in western EU countries. While sub-national payers need to ensure that biosimilar medicines can be supplied to their patients at a consistent level of quality and quantity, biosimilar manufacturers need to ensure new compounds are launched into the market, at suitable price, with a successful commercial strategy that includes dedicated sales and marketing efforts. Moving forward, it will be important for biosimilar manufacturers to understand what payers, physicians and patients value within a new medicine before entering price discussions.

PHP124

ECONOMIC EVALUATION OF THE USE OF HUMAN ALBUMIN IN A BRAZILIAN PUBLIC HOSPITAL

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OBJECTIVES: In Brazil, law regulates the use of human albumin and divide recommendations into formal, questionable and unsubstantiated. The aim was to verify compliance with the requirements of this medicine in relation to national guidelines and calculate the costs of unsubstantiated indications of human albumin 20%, at a public hospital. **METHODS:** We evaluated the records of patients who used human albumin 20% during hospitalization at a public hospital in the period from August, 2013 to August, 2014. There were no restrictions as patient age or duration of therapy. Quantitative variables were expressed as by mean and standard deviation, and not quantitative variables in by absolute and relative frequency. **RESULTS:** We evaluated the records of 63 patients with a mean age of 60.6 ± 71.8 years. Most of them were men (40; 64.5%). Length of stay was 30.0 ± 47.2 days. Duration of albumin therapy was 6.0 ± 6.7 days (mean). Average total cost was US $ 174.13 ± 195.10 per patient. Nineteen (30.2%) of albumin indication was classified as questionable and 15 (23.8%) as unsubstantiated. Cost of unsubstantiated indications was US $ 2,379.80/year or US $ 158.65/patient, this represents 21.7% costs of albumin during the study period. Unsubstantiated indications were: use in intensive care (12; 19.0%), fluid replacement in acute losses (2; 3.2%) and hypoalbuminemia in patients with